

Applic. No.: 10/804,151

Amdt. Dated June 22, 2005

Reply to Office action of March 22, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claim 1 (currently amended). A measuring system, ~~for recording angular and linear absolute values, the measuring system comprising:~~

a scale including at least two segments identically created for the generation of absolute values, each of said at least two segments having at least one track, said at least one track including a measurement track for generating a first absolute value of a position within said segments and at least one suitable track being at least one part of said at least one track for determining a second absolute value of the particular segment reached having at least one track for creating the absolute values, said track having at least two identically configured segments;

a sensor configuration for measuring and recording the absolute values of each of said segments reached;

~~a switch configuration~~ an evaluation unit connected to said sensor configuration and providing a total absolute value for

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further processing, said total absolute value ~~made up~~  
consisting of ~~[[a]]~~ the first absolute value of the position  
within said segments counted and ~~[[a]]~~ the second absolute  
value of a position within a the particular segment reached;  
and

a power supply supplying a main voltage and an auxiliary  
voltage; and

said a switch configuration having switches connected to said  
power supply and switching through the auxiliary voltage when  
the main voltage fails in an auxiliary power mode and said  
sensor configuration being only used in the auxiliary power  
mode to determine an absolute value of the particular segment  
reached.

Claim 2 (currently amended). The measuring system according  
to claim 1, wherein:

said at least one track has a first track for creating the  
first absolute value and a second track suitable for  
determining the second absolute value ~~within the segment~~  
~~reached~~; and

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said sensor configuration has only one sensor for evaluating both said first track for creating the first absolute value and said second track suitable for determining the second absolute value ~~within the segment reached~~.

Claim 3 (currently amended). The measuring system according to claim 1, wherein:

said at least one track has a first track for creating the first absolute value and a second track suitable for determining the second absolute value ~~within the segment reached~~; and

said sensor configuration has at least two sensors, a first of said sensors evaluating said first track for creating the first absolute value and a second of said sensors evaluating said second track suitable for determining the second absolute value ~~within said segment reached~~.

Claim 4 (original). The measuring system according to claim 1, wherein said sensor configuration has at least two sensors, a first of said sensors acting as a redundancy for a second of said sensors in each case.

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Claim 5 (currently amended). The measuring system according to claim 4, further comprising:

a comparator unit; and

[[an]] said evaluation unit being connected to said comparator unit and said sensor configuration, said sensor configuration outputting signals from said sensors and the signals or parts of the signals useful for determining the absolute values of said segments are fed into said evaluation unit, said evaluation unit outputting calculated results for said segments from each of said sensors and the calculated results are compared in said comparator circuit and, if the calculated results vary, there is a switch over to only one of said sensors in said sensor configuration.

Claim 6 (currently amended). The measuring device system according to claim 1, further comprising an evaluation circuit, and if the auxiliary power mode is selected, the auxiliary voltage of said power supply is connected by said switch configuration to at least one of said sensor configuration and parts of said evaluation circuit required in the auxiliary power mode.

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Claim 7 (currently amended). The measuring device system according to claim 6, wherein if in the auxiliary power mode, said switch configuration having said switches interrupts connections of the main voltage with at least one of said sensor configuration and at least one part of said evaluation circuit.

Claim 8 (new). The measuring system according to claim 1, wherein the first absolute value and the second absolute value are linear values.

Claim 9 (new). The measuring system according to claim 1, wherein the first absolute value and the second absolute value are angular values.

Claim 10 (new). A measuring system, comprising:

a scale including at least two segments identically created for the generation of absolute values, each of said at least two segments having at least one track, said at least one track including a measurement track for generating a first absolute value of a position within said segments and at least one suitable track for determining a second absolute value of the particular segment reached, said scale being a structured material characteristic or a structured surface on a material;

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a sensor configuration for measuring and recording the absolute values of each of said segments reached;

an evaluation unit connected to said sensor configuration and providing a total absolute value for further processing, said total absolute value consisting of the first absolute value of the position within said segments and the second absolute value of the particular segment reached;

a power supply supplying a main voltage and an auxiliary voltage; and

a switch configuration having switches connected to said power supply and switching through the auxiliary voltage when the main voltage fails in an auxiliary power mode and said sensor configuration being only used in the auxiliary power mode to determine an absolute value of the particular segment reached.

Claim 11 (new). The measuring system according to claim 1, wherein:

said suitable track is at least one part of said measurement track; and

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said sensor configuration has only one sensor for evaluating both said measurement track for creating the first absolute value and said suitable track for determining the second absolute value.

Claim 12 (new). The measuring system according to claim 1, wherein:

said suitable track is at least one part of said measurement track; and

said sensor configuration has at least two sensors, a first of said sensors evaluating said measurement track for creating the first absolute value and a second of said sensors evaluating said suitable track for determining the second absolute value.

Claim 13 (new). The measuring system according to claim 10, wherein:

said at least one track has a first track for creating the first absolute value and a second track suitable for determining the second absolute value; and

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said sensor configuration has only one sensor for evaluating both said first track for creating the first absolute value and said second track suitable for determining the second absolute value.

Claim 14 (new). The measuring system according to claim 10, wherein:

said at least one track has a first track for creating the first absolute value and a second track suitable for determining the second absolute value; and

said sensor configuration has at least two sensors, a first of said sensors evaluating said first track for creating the first absolute value and a second of said sensors evaluating said second track suitable for determining the second absolute value.

Claim 15 (new). The measuring system according to claim 10, wherein:

said suitable track is at least one part of said measurement track; and



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said sensor configuration has only one sensor for evaluating both said measurement track for creating the first absolute value and said suitable track for determining the second absolute value.

Claim 16 (new). The measuring system according to claim 10, wherein:

said suitable track is at least one part of said measurement track; and

said sensor configuration has at least two sensors, a first of said sensors evaluating said measurement track for creating the first absolute value and a second of said sensors evaluating said suitable track for determining the second absolute value.